

Date: Sat, 2 Oct 93 04:30:35 PDT  
From: Ham-Space Mailing List and Newsgroup <ham-space@ucsd.edu>  
Errors-To: Ham-Space-Errors@UCSD.Edu  
Reply-To: Ham-Space@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Space Digest V93 #43  
To: Ham-Space

Ham-Space Digest                      Sat, 2 Oct 93                      Volume 93 : Issue    43

Today's Topics:

                    Is MIR still there?  
SPACE TRIVIA LIST UPDATE - 1st of October, 1993

Send Replies or notes for publication to: <Ham-Space@UCSD.Edu>  
Send subscription requests to: <Ham-Space-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Space Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-space".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 1 Oct 93 16:56:35 GMT  
From: ogicse!uwm.edu!math.ohio-state.edu!sdd.hp.com!col.hp.com!  
dfk@network.ucsd.edu  
Subject: Is MIR still there?  
To: ham-space@ucsd.edu

I had been monitor MIR on packet on 145.550 for a week or two up  
through Sept 22. Since that time I haven't heard a thing. Are they  
still there, did they turn their radio off, or is my equipment broke?  
(I can work local packet just fine.)

If anybody can set my mind at ease, I'd appreciate it.

Dave Kurth NOUVR  
Colorado Springs, CO  
dfk@col.hp.com

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Date: Fri, 1 Oct 1993 16:50:36 GMT  
From: munnari.oz.au!metro!seagoon.newcastle.edu.au!scorch!lukpla@network.ucsd.edu

Subject: SPACE TRIVIA LIST UPDATE - 1st of October, 1993  
To: ham-space@ucsd.edu

PLEASE PLEASE PLEASE POST ANYTHING YOU HAVE THAT MIGHT BE OF THE  
SLIGHTEST RELEVANCE TO THIS LIST.....

I'm still here everyone - don't forget me. With almost half my  
workload now finished I have a little time to post this update. The items  
are starting to get harder to find now, and it will be important to  
prevent duplication.

I still have a lot of reading ahead of me, but the updates will  
probably now come less frequently thanks to the lengths we need to go to  
ensure we don't duplicate.

It's pretty much worth it.

This list is now available via anonymous ftp from the following sites:

krakatoa.jsc.nasa.gov as /misc-docs/trivia.txt  
ames.arc.nasa.gov as /pub/SPACE/MISC/trivia.txt

If at ANY time you want the latest update on the trivia list, then it  
will be at one of these sites. I will be updating the complete list to  
these sites each time an update appears in the newsgroups.

The news distribution of this file is now:-

sci.space  
sci.space.shuttle  
sci.astro  
  
rec.radio.amateur.space

The last group will only be included when there are new items  
of trivia are related to amateur radio in some way.

Luke Plaizier - Space Trivia List Moderator

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*      SPACE TRIVIA - Interesting Trivia Information on Manned and      *
*                      Unmanned Spaceflight from anywhere around the    *
*                      Globe. (Or the Universe for that matter!)         *
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(252) Despite the complexity of the Space Shuttle Main Engines, effectively the entire engine operation is controlled by 5 valves:-

The Main Oxidizer Valve, the Main Fuel Valve, the Oxidizer Preburner Oxidizer Valve, the Fuel Preburner Oxidizer Valve, and the Chamber Coolant Valve.

[NASA - Space Shuttle News Reference.]

(253) When Johna Kepler speculated on a journey to the Moon, writing a fanciful account of a sleeping man transported to the Moon by Demons, he almost caused his mother to be executed as a witch.

[From 'Lift Off' by Michael Collins, pg 116]

(254) One critical factor in determine the stability of a Rocket Engine was it's ability to recover from a momentary abnormality and restore itself to safe, stable combustion. But how to determine this on the test stand? Clever engineers induced combustion instability by using 'bombs', explosive charges deliberately set off inside a thrust chamber to see how the engine would react to a near instantaneous disruption of smooth, controlled burning.

[From 'Lift Off' by Michael Collins, pg 124]

(255) Inside the F-1 engine, engineers used Rene 41 for part of a trubine, the same metal used on the Mercury capsule to protect the spacecraft against re-entry heating.

[From 'Lift Off' by Michael Collins, pg 125]

(256) Douglas Aircraft was unsure of what material to use to insulate the thrid stage Hydrogen Tank of the massive Saturn V Launch Vehicle. Originally they thought Balsa Wood was superior to any Man-Made material, but an analyisis of the available supply of Balsa Wood showed that every balsa tree in South America would have to be denuded to supply sufficient insulation for the Saturn fleet. Instead, polyurethane was poured into fibreglass forms to produce waffle-like tiles that were glued inside each Hydrogen tank - 43,000 tiles per tank.

[From 'Lift Off' by Michael Collins, pg 125]

(257) Once a tank was filled with Hydrogen it had to be inspected for leaks, and that was a tricky procedure. A jet of escaping hydrogen was apt to combine with oxygen in the air and burn, but in daylight the flame would be invisible. Douglas used infrared cameras on its test stands to detect any leaks, but the cameras had blind spots, so men were sent around the scaffolding, wearing protective clothing and holding brooms out in front of them. If a broom suddenly burst into flame, there was a leak!.

[From 'Lift Off' by Michael Collins, pg 126]

- (258) If all the data from the Telemetry of the Saturn V were printed, it would fill 300 pages each second.  
[From 'Lift Off' by Michael Collins, pg 127]
- (259) The descent engine of the Apollo Lunar Module was the first throttle controlled engine to be used by a spacecraft.  
[From 'Lift Off' by Michael Collins, pg 144]
- (260) The Sep 16, 1993, Mir EVA overlapped with the spacewalk from Discovery for 1h 43 min; this is the first time 4 people have been spacewalking at once, and the first time American and Russian cosmonauts have spacewalked at the same time. (An earlier pair of EVAs this year, Manakov/Poleshchuk on Jun 18 and Low/Wisoff on Jun 25, were separated by only a week; otherwise there have been only three cases of Russian and American spacewalks occurring within a month of each other. The Russians made the first spacewalk but then only made one more between 1965 and 1977, by which time the Gemini, Apollo and Skylab programs were long over; then they started doing lots of EVAs from Salyut and Mir, but until this year spacewalks from the Shuttle were relatively rare.)  
[from jcm@urania.harvard.edu (Jonathan McDowell)]
- (261) I was a volunteer on the KC-135 Vomit Comet for medical experiments the same time that the ladies were volunteering to test the 1st Shuttle toilet in 0g. When my tests were over I went back to one of the seats in the rear of the plane and sat. Soon after, the woman who ran the experiments on me asked if I was sitting on something. Sure enough in the seat with me was a large ziplock baggie containing a clear narrow plastic funnel with tubing. This was her personal connection to the toilet. As she explained it to me she told me the prototype was called the Female Urine Collection Kit. We both agreed that the name would have to be changed before operational use.  
[rlove@raptor.rmNUG.ORG (Robert B. Love )]
- (262) Due to the 5psi atmosphere of Skylab, The crews of Skylab learned that - even shouting - their voices didn't carry and they were forced to use the intercom if more than 10 feet apart.  
[From 'Lift Off' by Michael Collins, pg 166]
- (263) The chamber of the Space Shuttle Main Engines is some 3000psi - over three times that of the Saturn V's engines.  
[From 'Lift Off' by Michael Collins, pg 209]
- (264) After it's first flight, Columbia was found to have over 400 nicks, scrapes and gouges in its fragile tiles.  
[From 'Lift Off' by Michael Collins, pg 221]

(265) It takes more than a half a mile of welds to put a Space Shuttle External Tank together.

[National Geographic, Mar 1981, pg 332]

The precise length is 917.6m

[Space Shuttle News reference, NASA]

(266) A bolt, which attaches the Solid Rocket Booster to the External Tank, is made of a special high-grade steel which is similar in composition and design to the separation bolt of the Viking Mars orbiter and lander.

[Space Shuttle News Reference, NASA]

(267) Although no larger than the fuel cells used on the Apollo Program, each fuel cell on the Space Shuttle has six times the output of the Apollo fuel cells.

[Space Shuttle News Reference, NASA]

(268) Accumulated water and other fluids in the Space Shuttle Orbiter drain out through the Limbar holes (much like limbar holes in frames along the keel of a boat) to the lowest point for removal.

[Space Shuttle News Reference, NASA]

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*      SPACE RUMOURS - Interesting Rumours - True or Popular - that have      *
*                               surfaced from anywhere around the globe concerning *
*                               space topics.                                   *
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*      PURE GUESSWORK - Items that are awaiting verification for                *
*                               placement into either rumour or fact trivia.      *
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(1) It seems that after STS-1 got in orbit, one of the astronauts was eager to try out the (older, also expensive) toilet. I think it was Crippen.

Apparently all John Young heard was this "Whoosh AHHHHHH!!!!!!". There is a fan in it to suck down the contents. Apparently the fan was verified to be working correctly (i.e. it spun up) but nobody ever checked to see if it sucked or blew...  
[From HOLLIS@TITAN.KSC.NASA.GOV]

- (2) When trying to find a way to keep the water out of the parachute compartment after splashdown, scientists ended up using a product from a drug store. I saw this on a space travel special. The story goes something like one of the project scientists sons was up with a cold. So, the scientist mixed up a cold remedy gel (added water to a powder) for his son late one night. This gave him the idea. When itemizing the inventory for the project budget, they used the drug store product code and used a backwards spelling of the product name. Of course, they adapted it a bit for the spacecraft, but the same principle of this gel was used.  
[mark.blevis@qmail.dgrc.doc.ca]
- (3) Supposedly, one shuttle launch was delayed due to a rare bird nesting in the launch pad gantry. Does anyone know if this is true and if so which launch ? (According to the guide on a KSC coach tour - probably not the most reliable of sources 8-})  
[Mark Grant <mark@isltd.insignia.com>]
- (4) The Demise of Blue Streak and ELDO put paid to plans laid in 1968 to launch leeches - 'the world's most ideal space travellers' - on an extended flight.  
"Give them a bloody meal before they go, and they'll need nothing for a year-and-a-half!" was how one scientist characterized the suitability of leeches for space travel. Posing no feeding or waste disposal problems, leeches might even breed en-route - providing researchers with a useful insight into the genetic side-effects induced by exposure to radiation in space.
- (5) In some respects, Neil Armstrong was fortunate to become the first Moonwalker. In 1963, his place in the history books was under seige from a chimpanzee named Howard!  
After just one year of study at the US Space School, Howard had broken the world's land speed record in a rocket propelled sled, and had been banned from playing noughts-and-crosses with visitors because he usually won!  
The chances are that if a monkey had been selected to fly to the Moon instead of a man, it would have been Howard.
- (6) Under the direction of NASA's Ames Research Center in California, a study was conducted into the viability of employing a 'vacuum cleaner' type device in Low-Earth orbit to collect some of the particles of Moonrock (tectites) that are dislodged from the lunar surface by

annual meteorite showers and sometimes find their way to the Earth's surface.

Collected in orbit and returned to Earth by parachute, samples gathered in this way would be free from the contamination caused by passage through the Earth's atmosphere.

- (7) In reference to item 64 in the trivia list, Is the reason given true? 1978-1986 the rumor was that if ejected at 100 Kft then you would drift up to 200 Kft before falling back. During the fall, the aero heating would become so intense that helmet melting would be likely. I'd love to know real reason the 100Kft limit was enacted.  
[from rlove@raptor.rmug.org]

(Can anyone come up with some sources for backing up/refuting the last three items?)

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Editor - Newcastle Space Frontier Society UPDATE  
Moderator - SPACE TRIVIA LIST  
lukpla@scorch.apana.org.au

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End of Ham-Space Digest V93 #43

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